8990000069

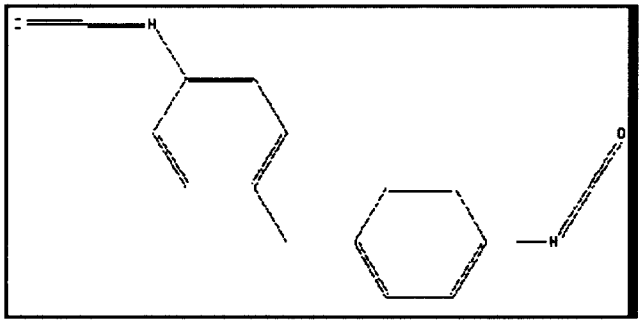
Contains No CBI

PDCN: 88920000090

Company Name: ICI Americas, Inc. **8EHQ-1191-1444 A**
Submission Dated: October 29, 1991
Chemical Name: 4,4'-Methylenediphenyl-diisocyanate
CAS Number: 101-68-8

8EHQ-91-1444
SP001 01/12/94

89940000069



STUDY DESIGN AND RESULTS:

Subchronic Inhalation Toxicity Study in Rats (Summary Results)

Dosage/route/duration: Female Wistar rats were exposed via inhalation to the test material at 0.3, 1.0, and 3.0 mg/m^3 18 hours/day, 5 days/week, for 90 days.

RESULTS:

- Slightly lower body weight gain was observed in all animals.
- An increase of the wet and dry lung weights was observed at 1 and 3 mg/m^3.
- Total cell count of bronchio-alveolar lavage (BAL) as well as the percentage of granulocytes and lymphocytes from the highest dose group was clearly higher and the percentage of macrophages was reduced. Total protein, ß-glucuronidase and lactate dehydrogenase in BAL was also elevated in the high dose group.
- Mechanical lung function measurements using the whole body plethysmograph and the anesthetized, spontaneously breathing rat showed a larger functional residual capacity and residual volume, decreased quasistatic lung compliance and CO diffusing capacity after 3 mg/m^3 exposure.
- Histological examination revealed submucosal infiltration of mononuclear cells, globulet-cell hyperplasia and erosion of the respiratory epithelium in nasal and paranasal sinai and hyperplasia of the bronchus associated lymphatic tissue and inflammatory alterations in the lungs at 1 and 3 mg/m^3.

VOLUNTARY ACTIONS INDICATED:

_ **WORKER/OTHER NOTIFICATION**
_ **EXPOSURE REDUCTION**
_ **MSDS/LABELS CHANGED**
X **OTHER** The submitter reported that they have reviewed their product literature and believe that the present TLV for MDI (0.05 mg/m^3) offers sufficient protection against long- and short-term affects. They also indicated that their MSDS for

MDI currently reflects known health hazards including respiratory sensitization and the potential for permanent decreases in lung function.